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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/705,645

11/10/2003

Jeffrey L. McElray SR.

6138

7590

06/12/2006

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EXAMINER

WILLOUGHBY, TERRENCE Ronique

ART UNIT

PAPER NUMBER

2836

DATE MAILED: 06/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/705,645

Applicant(s)

MCELRAY ET AL.

Examiner

Terrence R. Willoughby

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 6, 8-10-13, 15-17, 19, and 36-43 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

- 6) ☒ Claim(s) 1-3, 6, 8-10-13, 15-17, 19, and 36-43 is/are rejected.

- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.

- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

- a) ☐ All b) ☐ Some \* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)

- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

- 5) ☐ Notice of Informal Patent Application (PTO-152)

- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

Applicant amendment filed on 3/7/2006 has been entered. Accordingly no claims have been amended and claims 21-35 have been cancelled. New claims 36-43 were added. It also included remarks/arguments.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3,6,8-10, 13, 15-17, 19, 36-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zulaski et al. (US 5,303,1 12) and in view of Shvach et al. (US 6,005,757).

Regarding claim 1, Zulaski et al. discloses a method for controlling (Fig.1, 11) a recloser (Fig.1, 22) for an electrical power line (Fig.1, 20) comprising: determining a protective device operations (column I, lines 5-12) and determining a present condition (column 3, lines 58-62)., and determining a behavior of function for the recloser based on the protective device operations and the present conditions (column 4, lines 15-30 and lines 41-56; see Tables 1, 11, 111 and Fig. 5 and 6); and adaptively setting the recloser to function in accordance with the behavior function (column 10, lines 58-68 and column 11, lines 1-5). Zulaski et al. lacks the protection setting group having at

least one associated feature, wherein the at least one associated feature comprises one of time of day, day of week, and month of year.

However, Shvach et al. discloses a programmable tripping unit that uses various parameters to control tripping including time and date (col. 12, lines 59-64). It would have been obvious to one of ordinary skill in the art at the time of invention to have modified the device of Zulaski et al. to incorporate the time and date as control parameter as disclosed in Shvach et al. because Zulaski et al. does not disclose what parameters were used in his sectionalizer and Shvach et al. teaches that time and dates are useful parameters when detecting faults.

Regarding claim 2, Zulaski et al. in view of Shvach et al. discloses the method according to claim 1, further comprising continuously monitoring the present condition and changing the behavior function responsive to the monitoring (Zulaski et al., column 2, lines 33-68 and column 3, lines 1-8).

Regarding claim 3, Zulaski et al. in view of Shvach et al. discloses the method according to claim 2, wherein monitoring the present condition comprises monitoring at predetermined intervals (Zulaski et al., column 4, lines 41-48).

Regarding claim 6, Zulaski et al. in view of Shvach et al. discloses the method according to claim 1, wherein the behavior function comprises one of fuse saving mode (column 3, lines 3-8) and fuse clearing mode (Zulaski et al., column 4., see Table 1, Fault Location, (F2-F3)).

Regarding claim 8, Zulaski et al. discloses a recloser control system (Fig.1, 11) for an electrical power line, comprising: a recloser (22), a memory (column 6, lines 53-

56), a recloser controller (15) and adaptively setting the recloser to function in accordance with a behavior function (column 10, lines 58-68 and column 11, lines 1-5). Zulaski et al. lacks the protection setting group stored in the memory means having at least one associated feature, wherein the at least one associated feature comprises one of time of day, day of week, and month of year.

However, Shvach et al. discloses a programmable tripping unit that uses various parameters to control tripping including time and date (col. 12, lines 59-64). It would have been obvious to one of ordinary skill in the art at the time of invention to have modified the device of Zulaski et al. to incorporate the time and date as control parameter as disclosed in Shvach et al. because Zulaski et al. does not disclose what parameters were used in his sectionalizer and Shvach et al. teaches that time and dates are useful parameters when detecting faults.

Regarding claim 9, Zulaski et al. in view of Shvach et al. discloses the recloser control system according to claim 8, wherein the recloser controller (Zulaski et al., column 3, lines 59-63, column 5, lines 45-48, column 10, lines 45-47) monitors a present condition of each associated feature of each behavior function in the protection setting group, and determines the behavior function based on the present condition.

Regarding claim 10, Zulaski et al. in view of Shvach et al. discloses the recloser control system according to claim 8, wherein the recloser controller comprises the memory (column 3, lines 62-66, column 1, lines 1, 64-68., column 6, lines 54-55).

Regarding claim 13, Zulaski et al. in view of Shvach et al. discloses the recloser control system according to claim 8, wherein the at least one behavior function

comprises one of fuse saving mode (column 3, lines 3-8) and fuse clearing (Zulaski et al., column 4, Table 1, Fault Location, (F2-F3)).

Regarding claim 15, Zulaski et al. discloses a computer-readable medium (column 4, lines 11-14) having computer-executable instructions for performing steps comprising: a recloser (Fig. 1, 22) operating on an electrical power line (Fig. 1, 20), determining a protective device operations (column 1, lines 5-12) and determining a present condition (column 3, lines 58-62), and determining a behavior of function for the recloser based on the protective device operations and the present conditions (column 4, lines 41-56 and Tables 1, 11, 111 and Fig. 5 and 6); and adaptively setting the recloser to function in accordance with the behavior function (column 10, lines 58-68 and column 11, lines 1-5). Zulaski et al. lacks the protection setting group having at least one associated feature, wherein the at least one associated feature comprises one of time of day, day of week, and month of year.

However, Shvach et al. discloses a programmable tripping unit that uses various parameters to control tripping including time and date (col. 12, lines 59-64). It would have been obvious to one of ordinary skill in the art at the time of invention to have modified the device of Zulaski et al. to incorporate the time and date as control parameter as disclosed in Shvach et al. because Zulaski et al. does not disclose what parameters were used in his sectionalizer and Shvach et al. teaches that time and dates are useful parameters when detecting faults.

Regarding claim 16, Zulaski et al. in view of Shvach et al. discloses the computer-readable medium according to claim 15, further comprising computer-

executable instructions for continuously monitoring the present condition and changing the behavior function responsive to the monitoring. (Zulaski et al. see Abstract).

Regarding claim 17, Zulaski et al. in view of Shvach et al. discloses the computer-readable medium according to claim 16, wherein monitoring the present condition comprises monitoring at predetermined intervals (Zulaski et al., column 4, lines 44-48).

Regarding claim 19, Zulaski et al. in view of Shvach et al. discloses the behavior function comprises one of fuse saving mode (Zulaski et al., column 3, lines b-8) and fuse clearing mode (Zulaski et al., column 4, Table 1, Fault Location, (F2-F3)).

Regarding claim 36, Zulaski et al. discloses the claimed said recloser control system for an electrical power line, the recloser control system comprising: a recloser(22); a microcomputer(15) operable to control the recloser (col. 4, ll. 11-14); and memory (col. 6, ll. 53-56) storing control instructions, which, when executed by the microcomputer, controls the operation of the recloser (column 2, lines 66-68 and column 3, line 1) in accordance with a control scheme selected from a plurality of different control schemes (column 3, lines 3-8; column 4, ;see Table 1, Fault Location, (F2-F3)) and load currents (column 9, Table III, (144,150)). Zulaski et al. lacks the control schemes is based on one or more variables selected from the group consisting of time of day, day of week, month of year.

However, Shvach et al. discloses a programmable tripping unit that uses various parameters to control tripping including time, date, and current (col. 12, line 40 and lines 59-64). It would have been obvious to one of ordinary skill in the art at the time of

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invention to have modified the device of Zulaski et al. to incorporate the time and date as control parameter as disclosed in Shvach et al. because Zulaski et al. does not disclose what parameters were used in his sectionalizer and Shvach et al. teaches that time and dates are useful parameters when detecting faults.

Regarding claim 37, Zulaski et al. in view of Shvach et al. discloses the claimed said recloser control system of 36, wherein a first one of the control schemes is a fuse saving control scheme (Zulaski et al., column 3, lines 3-8) and a second end of the control schemes is a fuse clearing control scheme (Zulaski et al., column 4, see Table 1, Fault Location, (F2-F3)), and wherein the one or more variables comprises time of day and day of week (Shvach et al., column 12, line 40 and lines 59-64).

Regarding claim 38, Zulaski et al. in view of Shvach et al. discloses the claimed said recloser control system of claim 37, wherein the control schemes are based on the time and date. Zulaski et al. and Shvach et al. does not explicitly claim the time of day is between 8:00 AM and 5:00 PM and the day of week is one of Monday, Tuesday, Wednesday, Thursday and Friday, then the second one of the control schemes is selected.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the workable range i.e. ( time and day of the week) for the recloser to adaptively open and close based on the desired settings and control schemes programmed under the control of a microprocessor (column 10, lines 45-66) to consume energy and reduce personnel cost for power distribution systems, since it has been held that where the general conditions of a claim are disclosed in the prior art,



discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding claim 39, Zulaski et al. in view of Shvach et al. discloses the claimed said recloser control system of claim 36, wherein a first one of the control schemes causes the recloser to open in a single phase mode (Zulaski et al., column 3, lines 66-68) and a second one of the control schemes causes the recloser to operate in a three-phase mode (Zulaski et al., column 3, lines 45-46 and lines 50-51) and wherein the one or more variables comprises month of year (Shvach et al., col. 12, line 40 and lines 59-64).

Regarding claim 40, Zulaski et al. in view of Shvach et al. discloses the claimed said recloser control system of claim 39, wherein the control schemes are based on the time, date, and month of year. Zulaski et al. and Shvach et al. does not explicitly claim the month of the year is one of April, May, June, July, August and September; then the second one of the control schemes is selected.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the workable range i.e. (months of the year) for the recloser to adaptively open and close based on the desired settings and control schemes programmed into the controller to consume energy and reduce personnel cost for power distribution systems, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding claim 41, Zulaski et al. in view of Shavach et al. discloses the claimed said recloser control system of 36, wherein a first one of the control schemes is a fuse saving control scheme (Zulaski et al., column 3, lines 3-8) and a second one of the control schemes is a fuse clearing control scheme (Zulaski et al., column 4, see Table 1, Fault Location, (F2-F3)), and wherein the one or more variables comprises load current (Zulaski et al., column 9, Table III, (144,150)).

Regarding claim 42, Zulaski et al. in view of Shavach et al. discloses the claimed said recloser control system of claim 36, wherein a first one of the control schemes causes the recloser to operate in a single phase mode (Zulaski et al., column 3, lines 66-68) and a second one of the control schemes causes the recloser to operate in a three-phase mode (Zulaski et al., column 3, lines 45-46 and lines 50-51), and wherein the one or more variables comprises load current (Zulaski et al., column 9, Table III, (144,150)).

Regarding claim 43, Zulaski et al. in view of Shavach et al. discloses the claimed said recloser control system of claim 36, wherein the recloser system further comprises a controller that includes the microcomputer (Zulaski et al., (15) and col. 4, ll. 11-14) and the memory (Zulaski et al., col. 6, ll. 53-56).

### ***Response to Arguments***

#### **Regarding claims 1,8, and 36:**

Applicant argues that the control unit (11) does not control the recloser and that Zulaski et al. patent fails to show or suggest "A method for controlling a recloser". However, Zulaski et al. (Fig. 1) discloses the fault detection unit (10) is operated in

accordance with a **control method** and the sensed signals at (18), to detect various operations of protective devices and the conditions of the distribution network (20). See. Column 3, lines 52-62. The control unit (11) comprising a fault detection unit (10) and a controller (15) control the entire distribution network which includes circuit breakers, fuses, reclosers, sectionalizers, and remotely and locally operated distribution switches.

Applicant also argued that Zulaski et al. patent does not show or teach the steps of "adaptively setting the recloser to function in accordance with the behavior function". However, Zulaski et al. discloses in column 10, lines 58-66 that various settings and modifications can be programmed into a controller to adapt to particular characteristics of the upstream protective device or devices, such as circuit breakers, and reclosers (column 4, lines 66-68).

Applicant has also argued that Shvach et al. patent "fails to show using time of day, day of week, or month of year to control tripping". However, Shavch et al. discloses different types of control settings and tripping means (column 2, lines 66-67 and column 3, lines 1-5) can be stored inside a microprocessor that includes such settings as the date, time, day, month, year, and hours (column, 12, lines 58-64).

### ***Conclusion***

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

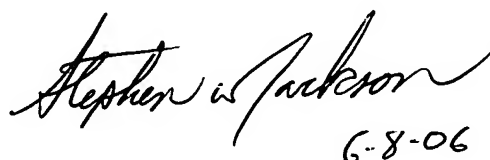
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrence R. Willoughby whose telephone number is 571-272-2725. The examiner can normally be reached on 8-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TRW  
5/30/06



6-8-06

STEPHEN W. JACKSON  
PRIMARY EXAMINER